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IN THE CLAIMS:

Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses.

1. (Currently Amended) A method for constructing a model useful for predicting performance of a system that includes a plurality of interconnected components defining at least one data flow path, the method comprising:

referencing a workload specification for the system; and

modeling the system using one or more a plurality of component models, each component model representing selected one or more of the components, each component model arranged in like relationship to the data flow path as the selected one or more of the components represented by the component model, wherein each the plurality of component models comprises (a) a constraint upon the workload specification input to that component model or (b) a transformer of the workload specification input to that component model so as to result in one or more output workloads that are input workload specifications to subsequent component models along the data flow path or and (c) both a constraint and a transformer, and wherein at least one of the component models comprises a constraint.

2. (Original) The method of claim 1 wherein the system is a disk array storage system.

3. (Original) The method of claim 2 wherein the selected one or more components are selected from the group consisting of interconnects, interfaces, controllers, caches, buses and disk drives.

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4. (Original) The method of claim 1 wherein one of the component models is a composite of a plurality of constituent component models.

5. (Original) The method of claim 1 further comprising:

storing a component model so as to enable later retrieval when constructing a model for another system.

6. (Original) The method of claim 1 further comprising:

retrieving a component model originally used in a model of another system, wherein one of the component models is identical to or derived from the retrieved component model.

7. (Original) The method of claim 2 further comprising:

specifying the workload specification in terms of data flow parameters selected from the group consisting of I/O request type, request rate, request size, spatial correlation of requests, temporal correlation of requests, concurrency of requests and correlation among multiple I/O streams.

8. (Original) The method of claim 7 wherein the specifying step further comprises specifying statistics for the selected data flow parameters.

9. (Original) The method of claim 1 further comprising:

calibrating the model; and

validating the model.

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10. (Currently Amended) A method for predicting performance of a system that includes a plurality of interconnected components defining at least one data flow path, the method comprising:

specifying a workload specification for the system;

modeling the system using one or more component models, each component model representing selected one or more of the components, each component model arranged in like relationship to the data flow path as the selected one or more of the components represented by the component model, wherein each component models is (a) a constraint upon the workload specification input to that component model or (b) a transformer of the workload specification input to that component model so as to result in one or more output workload specifications that are input workload specifications to subsequent component models along the data flow path or (c) both a constraint and a transformer, and wherein at least one of the component models is a constraint; and

operating on the workload specification by at least some of the component models along the data flow path, wherein the operating comprises

arranging the component models in a hierarchy corresponding to the data flow path;

using the specified workload as input to the topmost component model in the hierarchy; and

applying one or more of the component models to its input workload specification, starting with the topmost component model and then component models at progressively lower levels in the hierarchy, wherein output workload specification

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at one level is input workload specification at the next lower level, wherein the

applying step at each component model comprises

if the component model comprises a constraint, evaluating whether the input

workload specification satisfies or violates the constraint;

if the component model comprises a workload specification transform,

modifying the input workload specification so as to produce one or more output

workload specifications that are input workload specifications for component models

at the next lower level in the hierarchy; and

if the component model does not comprise a workload specification transform,

then setting the output workload specification equal to the input workload

specification.

11.   (Canceled).

12. (Original) The method of claim 11 further comprising:

terminating the operating step the first time a constraint is violated.

13. (Original) The method of claim 11 wherein the evaluating step further comprises

determining quantitatively the extent to which the input workload satisfies or violates the

constraint.

14. (Original) The method of claim 11 further comprising:

reporting results of the computationally applying step.

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15. (Original) The method of claim 14 wherein the results comprise a binary indicator, one value corresponding to the case in which all constraints are satisfied, the other value corresponding to the case in which one or more constraints are not satisfied.

16. (Original) The method of claim 14 wherein the results comprise the identifications of any model components having a constraint that is violated.

17. (Original) The method of claim 14 wherein the results comprise quantified assessments of the extent to which constraints are satisfied or violated.

18. (Original) The method of claim 11, further comprising:

recursively repeating the specifying step and the applying step until a predetermined condition occurs.

19. (Currently Amended) A computer readable medium on which is embodied content that, when executed, is used by a computer system in predicting performance of a system that includes a plurality of interconnected components defining at least one data flow path, the content comprising:

data specifying a workload for the system;

data modeling the system using one-or-more a plurality of component models, each component model representing selected one or more of the components, each component model arranged in like relationship to the data flow path as the selected one or more of the components represented by the component model, wherein each the plurality of component

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models is comprise (a) a constraint upon the workload specification input to that component model or (b) a transformer of the workload specification input to that component model so as to result in one or more output workload specifications that are input workload specifications to subsequent component models along the data flow path or and (c) both a constraint and a transformer, and wherein at least one of the component models is a constraint; and

instructions for operating on the workload specification by at least some of the component models along the data flow path.

20. (Original) The computer readable medium of claim 19 wherein the content further comprises:

a database containing data related to component models other than or in addition to said component models.

21. (Currently Amended) The method of claim 1, wherein each of the plurality of component models representing selected one or more of the components, each component model arranged in like relationship to the data flow path as the selected one or more of the components represented by the component model further comprises:

each component model representing represents at least one of a plurality of selected components, each component model arranged in like relationship to the data flow path of the selected plurality of components in the system.

22. (Currently Amended) The method of claim 10, wherein each of the plurality of component models representing selected one or more of the components, each component

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~~model arranged in like relationship to the data flow path as the selected one or more of the~~

~~components represented by the component model further comprises:~~

~~each component model representing~~ <u>represents</u> at least one of a plurality of selected

components, each component model arranged in like relationship to the data flow path of the

selected plurality of components in the system.